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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/541,774

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Pierre Barberis

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EXAMINER

SHEVIN, MARK L

ART UNIT

PAPER NUMBER

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/541,774	<b>Applicant(s)</b> BARBERIS ET AL.	
	<b>Examiner</b> Mark L. Shevin	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Status of Claims*

1. Claims 11-20, filed in Applicant's reply on February 19<sup>th</sup>, 2008 are currently under examination, and claims 11 and 16 were amended. The previous Office Action, mailed November 14<sup>th</sup>, 2007, had similarly addressed claims 11-20, which were originally filed as part of a preliminary amendment filed July 7<sup>th</sup>, 2005.

### *Status of Previous Rejections*

#### Charquet

2. The previous rejection of claims 11-16 and 18-20 under 35 U.S.C. 103(a) over **Charquet** (US 5,674,330) in the Office action dated November 14<sup>th</sup>, 2007, have been withdrawn. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Upon further consideration, Applicant's remarks at paragraph 2 on page 5 are persuasive in distinguishing hot rolling as a form of forging.

#### Sabol

3. The previous rejection of claims 11-16 and 18-20 under 35 U.S.C. 103(a) over **Sabol** (EP 0.085.553) in the Office Action dated November 14<sup>th</sup>, 2006, have been maintained.

Regarding claim 11, with respect to the added limitations of "wherein a second forging stage follows the first forging stage..." and "extruding or hot rolling the forged ingot", Sabol teaches that the billet may be forged a second time to a size and shape appropriate for extrusion (p. 2, lines 25-29).

Regarding claim 16, changing “a” to “the” does not change of the scope of the claim and thus the rejection stands as stated in the previous Office Action.

Sabol in view of Armand

4. The previous rejection of claim 17 under 35 U.S.C. 103(a) over Sabol or Charquet in view of Armand (US 4,108,687) in the Office Action dated November 14<sup>th</sup>, 2007 has been maintained.

As this rejection was in the form of “A or B in view of C”, although B has been withdrawn as a primary reference for rejecting the independent claim, reference A (Sabol) in view of C (Armand) is still in effect.

Double Patenting

5. The previous provisional rejections of claims 11-15 and 19-20 under the doctrine of non-statutory double patenting in view of co-pending application 10/541,262 have been withdrawn.

Upon further consideration, Applicant's remarks at paragraph 1 on page 9 are persuasive in distinguishing the copending claims from the instant claims in that the co-pending claims do not disclose a two-stage forging operation.

***Response to Applicant's Arguments:***

6. Applicant's arguments, see paragraph 2 on page 5, filed February 19<sup>th</sup>, 2008, with respect to the difference between hot rolling and forging have been fully considered and are persuasive. The rejection of claims 11-16 and 18-20 over Charquet have been withdrawn as explained above. Applicant's arguments (p. 4, para 3 – p. 6, para 4) with

respect to claims rejected using Charquet have been considered but are moot in view of the withdrawal of rejections using Charquet as explained above.

7. Applicant asserts (p. 7, para 2) that Sabol does not teach or disclose “wherein a second forging stage follows the first forging stage, and extruding or hot rolling the forged ingot” as recited in the amended claim 11. The Examiner has already addressed this assertion in maintaining the rejection as discussed in section 3 above.

Applicant then attempts to distinguish Sabol from the instant claim 11 by pointing to p. 2, lines 4-19 of the reference. Sabol still does teach a second forging stage that “follows the first forging stage” as discussed above. Furthermore, as Applicant’s method is described using “comprising”, additional steps are within the scope and purview of the instant claim (MPEP 2111.03, para 2).

With respect to the rejection of claim 17 using Sabol in view of Armand, Applicant asserts that Sabol does not teach the claimed process in that two forging operations are not taught or suggested (p. 8 , para 2). As stated in the Office Action, Armand teaches a method of hot working zirconium alloys by forging cast ingots in the alpha + beta range of 830-950 °C (col. 3, lines 10-13 and 42-51). The duration of thermal treatment may be shortened by combining mechanical effects, in the form of consecutive hot working operations such as forging, carried out in the alpha + beta range with intermediary reheating (col. 3, lines 42-51). Armand teaches a species examples with two forging operations performed at 850 C (in the alpha + beta phase field) and concludes that this process increased strength 7-20%, and yielded a lowered creep rate

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(col. 5, lines 1—17) when compared to a dual alpha phase working process (sequence 1, col. 4, lines 31-34).

Applicant next asserts that there is no motivation to combine Sabol in view of Armand, however motivation to combine comes from Armand's teaching of increased strength and lowered creep rate using his process and Armand furthermore states that his process could be applied to other zirconium alloys as long as they have a bi-phase alpha+beta range between 880 and 950 °C (col. 5, lines 57-61).

Lastly, Applicant states that Armand uses ingots that are much smaller than the present invention. However, one could attain the claims size limitations through routine optimization as Sabol repeatedly references later operation as being adjustable or tailored to the size and shape of the ingot billet (p. 2, lines 29-35). Moreover, changes in size and shape do not generally support patentability (MPEP 2144.04, IV, sections A and B.)

8. Applicant's arguments with respect to the provisional double patenting rejections are moot in view of the withdrawal of these rejections as mentioned above.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**-- Claims 11-20 are finally rejected**

**-- No claims are allowed**

The rejections above rely on the references for all the teachings expressed in the texts of the references and/or one of ordinary skill in the metallurgical art would have reasonably understood or implied from the texts of the references. To emphasize certain aspects of the prior art, only specific portions of the texts have been pointed out. Each reference as a whole should be reviewed in responding to the rejection, since other sections of the same reference and/or various combinations of the cited references may be relied on in future rejections in view of amendments.

All recited limitations in the instant claims have been met by the rejections as set forth above. Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121; 37 C.F.R. Part §41.37 (c)(1)(v); MPEP §714.02; and MPEP §2411.01(B).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark L. Shevin whose telephone number is (571) 270-3588. The examiner can normally be reached on Monday - Thursday, 8:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy M. King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

***/Mark L. Shevin/***

Examiner, Art Unit 1793

***/Roy King/***

Supervisory Patent Examiner, Art Unit 1793

April 25th, 2008  
10-541,774